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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,300	07/17/2003	Stefan Graf	71058	3424

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EXAMINER	
MARC, MCDIEUNEL	

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/623,300	Applicant(s) GRAF ET AL.	
	Examiner McDieunel Marc	Art Unit 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/17/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-16 are presented for examination.

Specification

2. The abstract of the disclosure is objected to because of the "invention". Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 15 is objected to because of the following informalities:

There is no support for "chouceable" in the specification. Examiner believes it to be a typo. Appropriate correction is required in the next communication. See claim 15, line 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al. (Construction and Soccer Dynamics Analysis for an Integrated Multi-agent Soccer Robot System, 2001).

As per claims 1 and 9, Huang *et al.* teaches a multi-agent soccer robot having a system and an associated method for controlling a first robot (1) (see fig. 1 wherein any robot of a team can be considered as first robot in so on) and at least one other robot (2) (see fig. 1, after establishing a first robot of a team, then come other robots), the at least one other robot (2) being calibrated relative to the first robot by the determination of at least one coordinate transformation (SF1-2) of the first robot relative to at least one other robot and said at least one transformation is stored in a control device (2.1) of the other robot (SF1-2) (see fig. 1, bear in mind that " Coordination among robots is achieved by a coordination module that selects which sub-task must be accomplished by every robot. In cognitive systems, each task is related to a goal to be achieved by a robot and thus to a plan to be executed."), which in fact is the human being concept of soccer playing, wherein also the first robot (1) is calibrated relative to the other robot (2) by the determination of at least one independent coordinate transformation (SF2-1) and said at least one independent transformation (SF2-1) is stored in a control device of the first robot (see fig. 1, abstract, page 87, col. 2, section III. and pages 84-85). With respect to claim 9, a system for controlling a first robot (1) and at least one other robot (2) with at least one control means (1.1, 2.1) with a device (2.2) for calibrating at least one other robot (2) relative to the first robot (1) by determining at least one coordinate transformation (SF1-2) of the first robot (10 relative to the other robot (2) and with a memory means (2.3) in the control device (2.1) (see fig. 3 and page 86, col. 2, section 3.) of the other robot (2) for storing said at least one transformation (SF1-2), having determination means (1.2) for calibrating the first robot (1) relative to the other robot (2) by determining at least one independent coordinate transformation (SF2-1) of at least one other robot (2) relative to the first robot (1) and by a memory means (1.3) in a control device (1.1) of the first robot (1) for storing at least one independent

transformation (SF2-1) (see fig. 1, abstract, page 87, col. 2, section III. and pages 84-85 as described above).

As per claim 2, Huang *et al.* teaches a method, wherein in the case of at least three robots (see fig. 1, wherein each team has three robots), each robot is calibrated relative to the others by at least one independent (independent being considered as any one of the robots of the team that has/control the ball) determination of coordinate transformations and the at least one transformation of the calibration of each robot is stored in a control device thereof (see fig. 1 and page 87, col. 2, section III. as described above).

As per claim 3, Huang *et al.* teaches a method, wherein for each robot several calibrations are performed each at different positions and the thus obtained transformations (SF2-1, SF1-2) are stored (see all fig. 1).

As per claim 4, Huang *et al.* teaches a method, wherein the calibrations for each robot (1, 2) are performed at different positions (see fig. 1 and page 87, col. 2, section III. as described above).

As per claim 5, Huang *et al.* teaches a method, wherein in the case of cooperative operation of at least two robots (1, 2), the coordinates of the independent robot (1, 2) and the coordinates transformed relative thereto (on the basis of SF2-1 or SF1-2) of the independent robot or robots (2, 1) are used (see all fig. 1 and page 87, col. 2, section III. as described above).

As per claim 6, Huang *et al.* teaches a method, wherein in operating area-dependent (dependent being considered as any one of the robots of the team that being waiting for/not controlling the ball in the team) manner, the coordinates of one robot and the coordinates of one or other robots transformed thereto are used (see all fig. 1 and page 87, col. 2, section III. as described above).

As per claim 7, Huang *et al.* teaches a method, wherein in the cooperative operation of at least two robots (1, 2), as desired, one (1, 2) of the robots is used as the independent robot and the at least one other robot (2, 1) as a dependent robot (see all fig. 1 and page 87, col. 2, section III. as described above).

As per claim 8, Huang *et al.* teaches a method, wherein during an operating process the characteristic of the robots (1, 2) as an independent or dependent robot is changed (bear in mind that independent being considered as any one of the robots of the team that has/control the ball or dependent being considered as any one of the robots of the team that being waiting for/not controlling the ball in the team).

As per claim 10, Huang *et al.* teaches a system, with at least three robots (see fig. 1), wherein each of the robots (1, 2) in its control device (1.1, 1.2) has a means for its calibration (1.2, 1.2) (see page 87, col. 2, section III.) relative to each of the other robots (2, 1) by determining at least one coordinate transformation (SF2-1, SF1-2) relative to each of the other robots (2, 1), as well as a memory means (1.3, 2.3) for storing the in each case at least one coordinate transformation (SF2-1, SF1-2) (see fig. 1, particularly the Host computers I and II).

As per claims 11-12, Huang *et al.* teaches a system that designed for calibrating each robot (1, 2) by several transformations and for the storage of several such transformations; also at different locations (see fig. 1, particularly the Host computers I and II).

As per claim 13, Huang *et al.* teaches a system, characterized by the use of the coordinates of an independent robot and the transformed coordinates of the at least one dependent robot during cooperative operation of at least two robots (see fig. 1 and bear in mind that independent being considered as any one of the robots of the team that has/control the ball or dependent being considered as any one of the robots of the team that being waiting for/not controlling the ball in the team).

As per claims 14, Huang *et al.* teaches a system designed for using the coordinates of one robot and the coordinates of the other robot or robots transformed relative thereto in different areas of operation (see fig. 1 pictorially and as described above).

As per claims 15-16, Huang *et al.* teaches a system, designed for chouceable use of one robot as an independent robot and the at least one other robot as a dependent robot during cooperative operation of at the least two robots (see fig. 1 and bear in mind that independent being considered as any one of the robots of the team that has/control the ball or dependent being considered as any one of the robots of the team that being waiting for/not controlling the ball in the team).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (703) 305-4478. The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (703) 305-8233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

McDieunel Marc

Thursday, March 03, 2005

THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
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